## **WEST Search History**



DATE: Friday, December 29, 2006

Hide?	<u>Set</u> Name	Query	<u>Hit</u> Count
	DB =	PGPB, USPT; PLUR=YES; OP=OR	
	L20	(525/298)![CCLS]	222
	L19	(525/312)![CCLS]	224
	DB = 0	PGPB; PLUR=YES; OP=OR	
	L18	(525/312)![CCLS]	4
	L17	L16 and @pd > 20061229	0
	L16	(copolymer and olefin monomer and hydroxystyrene and capping or diphenylalkene or diphenylethylene).clm.	3939
	DB =	PGPB, USPT; PLUR=YES; OP=OR	
	L15	(525/328.9)![CCLS]	269
	L14	(525/328.8)![CCLS]	359
	L13	(525/326.5)![CCLS]	186
	L12	(525/288)![CCLS]	505
	L11	(525/270)![CCLS]	117
	L10	(525/245)![CCLS]	273
	L9	(525/299)![CCLS]	168
	L8	(526/279)![CCLS]	1324
	L7	(526/135)![CCLS]	367
	L6	(526/313)![CCLS]	545
	L5	(526/312)![CCLS]	928
	L4	(526/299)![CCLS]	84
	L3	(526/299)![CCLS]	84
	L2	L1 and @pd > 20060524	0
l.mal	L1	US-6750267-\$.DID. OR US-6469115-\$.DID. OR US-6268451-\$.DID. OR US-6194597-\$.DID. OR US-6051657-\$.DID. OR US-6046281-\$.DID. OR US-6025437-\$.DID. OR US-5981785-\$.DID. OR US-5777044-\$.DID. OR US-5700625-\$.DID. OR US-5690861-\$.DID. OR US-5677386-\$.DID. OR US-565837-\$.DID. OR US-5637647-\$.DID. OR US-5451647-\$.DID. OR US-5428111-\$.DID. OR US-5122572-\$.DID. OR US-4965340-\$.DID. OR US-4910321-\$.DID. OR US-4568732-\$.DID. OR US-4182818-\$.DID. OR US-4129557-\$.DID.	22

**END OF SEARCH HISTORY** 

of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

FILE 'HOME' ENTERED AT 17:05:39 ON 29 DEC 2006

=> set abbr on perm
SET COMMAND COMPLETED

=> set plurals on perms
'ON PERMS' IS NOT VALID HERE
For an explanation of the SET command, enter "HELP SET" at an arrow
prompt (=>).

=> set plurals on perm
SET COMMAND COMPLETED

=> file uspatall caplus japio
COST IN U.S. DOLLARS

COST IN U.S. DOLLARS

SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST

O.21
0.21

FILE 'USPATFULL' ENTERED AT 17:06:13 ON 29 DEC 2006
CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 17:06:13 ON 29 DEC 2006
CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'CAPLUS' ENTERED AT 17:06:13 ON 29 DEC 2006 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'JAPIO' ENTERED AT 17:06:13 ON 29 DEC 2006 COPYRIGHT (C) 2006 Japanese Patent Office (JPO) - JAPIO

=> s (olefin or ethylene or propylene or isoprene or isobutylene or isobutene) (8a) (hydroxystyren? or hydroxy(1w)styren? or vinylphenol or vinyl(1w)phenol or protect####(1a)hydroxy?)
L1 794 (OLEFIN OR ETHYLENE OR PROPYLENE OR ISOPRENE OR ISOBUTY

794 (OLEFIN OR ETHYLENE OR PROPYLENE OR ISOPRENE OR ISOBUTYLENE OR ISOBUTENE) (8A) (HYDROXYSTYREN? OR HYDROXY(1W) STYREN? OR VINYLPHE NOL OR VINYL(1W) PHENOL OR PROTECT####(1A) HYDROXY?)

=> s (copolymer# or interpolymer#)(s)(capping or capped or diphenylalkene or diphenylethylene or diphenyl(1w)alkene or diphenyl(1w)ethylene)

L2 6728 (COPOLYMER# OR INTERPOLYMER#)(S)(CAPPING OR CAPPED OR DIPHENYLAL

KENE OR DIPHENYLETHYLENE OR DIPHENYL(1W) ALKENE OR DIPHENYL(1W)

ETHYLENE)

=> s 11 and 12

L3 16 L1 AND L2

=> d 13 1-16 ibib abs

L3 ANSWER 1 OF 16 USPATFULL on STN

ACCESSION NUMBER: 2006:124448 USPATFULL

TITLE: Patternable low dielectric constant materials and their

use in ULSI interconnection

INVENTOR(S): Lin, Qinghuang, Yorktown Heights, NY, UNITED STATES

Sooriyakumaran, Ratnam, San Jose, CA, UNITED STATES

PATENT ASSIGNEE(S): International Business Machines Corporation, Armonk,

NY, UNITED STATES (U.S. corporation)

NUMBER KIND DATE -----

PATENT INFORMATION: US 2006105181 A1 20060518

APPLICATION INFO.: US 2005-314307 A1 20051221 (11)

Division of Ser. No. US 2003-338945, filed on 8 Jan RELATED APPLN. INFO.:

2003, PENDING

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: SCULLY SCOTT MURPHY & PRESSER, PC, 400 GARDEN CITY

PLAZA, SUITE 300, GARDEN CITY, NY, 11530, US

NUMBER OF CLAIMS:

EXEMPLARY CLAIM: 1-18

NUMBER OF DRAWINGS: 3 Drawing Page(s) LINE COUNT: 1172

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to ultra-large scale integrated (ULSI) interconnect structures, and more particularly to patternable low dielectric constant (low-k) materials suitable for use in ULSI interconnect structures. The patternable low-k dielectrics disclosed herein are functionalized polymers that having one or more

acid-sensitive imageable functional groups.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 2 OF 16 USPATFULL on STN

ACCESSION NUMBER: 2005:221674 USPATFULL

TITLE:

Triazine compounds, polymers comprising triazine

structural units, and method

INVENTOR(S): Brown, Sterling Bruce, Niskayuna, NY, UNITED STATES

Brack, Hans Peter, Al Etten-Leur, NETHERLANDS

Cella, James Anthony, Clifton Park, NY, UNITED STATES

Karlik, Dennis, Bergen op Zoom, NETHERLANDS

PATENT ASSIGNEE(S): General Electric Co. (U.S. corporation)

NUMBER KIND DATE

-----PATENT INFORMATION: US 2005192411 A1 20050901

APPLICATION INFO.: US 2003-672789 A1 20030926 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2001-941050, filed on 28

Aug 2001, ABANDONED

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: GENERAL ELECTRIC COMPANY, GE PLASTICS, ONE PLASTICS

AVENUE, PITTSFIELD, MA, 01201, US

NUMBER OF CLAIMS: EXEMPLARY CLAIM: LINE COUNT: 2331

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

In various embodiments the present invention comprises 2,4,6-trisubstituted-1,3,5-triazine capping agents comprising one, two, or three leaving groups as substituents with any remaining substituents being essentially inert to reaction with a nucleophilic group on a polymer or monomer, or reactive with a nucleophilic group on a polymer or monomer at a slower rate than any leaving group. The invention also comprises polymers or monomers with nucleophilic groups capped with a triazine moiety. Still other embodiments of the invention comprise processes for capping nucleophilic groups in a polymer or monomer which

comprises combining and reacting the polymer or monomer with a triazine-comprising capping agent.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

S/N 10/776,674

ANSWER 3 OF 16 USPATFULL on STN

ACCESSION NUMBER: 2005:203465 USPATFULL

TITLE: Copolymers comprising olefin and protected or

unprotected hydroxystyrene units

Faust, Rudolf, Lexington, MA, UNITED STATES INVENTOR(S):

Sipos, Laszlo, Dracut, MA, UNITED STATES

NUMBER KIND DATE -----US 2005176891 A1 US 2004-776674 A1 PATENT INFORMATION: 20050811 APPLICATION INFO.: 20040211 (10) instant apply DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LAHIVE & COCKFIELD, LLP., 28 STATE STREET, BOSTON, MA, LEGAL REPRESENTATIVE:

02109, US

NUMBER OF CLAIMS: 36 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 1 Drawing Page(s)

LINE COUNT: 847

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Novel copolymers, including block copolymers, which comprise: (a) a plurality of constitutional units that correspond to one or more olefin monomer species and (b) a plurality of constitutional units that correspond to one or more protected or unprotected hydroxystyrene monomer species.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 4 OF 16 USPATFULL on STN

ACCESSION NUMBER: 2004:178075 USPATFULL

Patternable low dielectric constsnt materials and their TITLE:

use in ULSI interconnection

Lin, Qinghuang, Yorktown Heights, NY, UNITED STATES INVENTOR (S):

Sooriyakumaran, Ratnam, San Jose, CA, UNITED STATES

PATENT ASSIGNEE(S): International Business Machines Corporation, Armonk, NY

(U.S. corporation)

NUMBER KIND DATE ------US 2004137241 A1 US 7041748 B2 PATENT INFORMATION: 20040715 20060509 APPLICATION INFO.: US 2003-338945 A1 20030108 (10)

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

Steven Fischman, Esq., Scully, Scott, Murphy & Presser, LEGAL REPRESENTATIVE:

400 Garden City Plaza, Garden City, NJ, 11530

NUMBER OF CLAIMS: 23 EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 3 Drawing Page(s)

LINE COUNT: 1263

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to ultra-large scale integrated (ULSI) interconnect structures, and more particularly to patternable low dielectric constant (low-k) materials suitable for use in ULSI interconnect structures. The patternable low-k dielectrics disclosed

herein are functionalized polymers that having one or more

acid-sensitive imageable functional groups.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 5 OF 16 USPATFULL on STN

2004:159388 USPATFULL ACCESSION NUMBER:

TITLE: Polar group-containing olefin copolymer, process for S/N 10/776,674

preparing the same, thermoplastic resin composition

containing the copolymer, and uses thereof

INVENTOR(S): Imuta, Junichi, Sodegaura-shi, JAPAN

Kashiwa, Norio, Sodegaura-shi, JAPAN
Ota, Seiji, Sodegaura-shi, JAPAN
Moriya, Satoru, Ichihara-shi, JAPAN
Nobori, Tadahito, Sodegaura-shi, JAPAN
Mizutani, Kazumi, Sodegaura-shi, JAPAN

PATENT ASSIGNEE(S): Mitsui Chemicals, Inc. (non-U.S. corporation)

PATENT INFORMATION: US 2004122192 A1 20040624 APPLICATION INFO.: US 2003-713278 A1 20031117 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2001-947460, filed on 7 Sep

2001, PENDING

NUMBER DATE ----- **----**PRIORITY INFORMATION: JP 2000-272345 20000907 JP 2000-345736 20001113 JP 2000-345737 20001113 JP 2000-345738 20001113 JP 2000-345814 20001113 JP 2000-345815 20001113 JP 2000-345816 20001113 JP 2000-362632 20001129

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: BIRCH STEWART KOLASCH & BIRCH, PO BOX 747, FALLS

CHURCH, VA, 22040-0747

NUMBER OF CLAIMS: 27 EXEMPLARY CLAIM: 1 LINE COUNT: 8328

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention is a polar group-containing olefin copolymer having excellent adhesion properties to metals or polar resins and excellent compatibility therewith. A process for preparing the copolymer, a thermoplastic resin composition containing the copolymer, and uses thereof are also described. The polar group-containing olefin copolymer comprises a constituent unit derived from an  $\alpha$ -olefin of 2 to 20 carbon atoms, and a constituent unit derived from a straight-chain, branched or cyclic polar group-containing monomer having at the end a polar group such as a hydroxyl group or an epoxy group and/or a constituent unit derived from a macromonomer having at the end a polymer segment obtained by anionic polymerization, ring-opening polymerization or polycondensation. The polar group-containing olefin copolymer and the thermoplastic resin composition containing the copolymer are used for films, sheets, modifiers, building/civil engineering materials, automobile exterior trim, electric/electronic parts, coating bases, compatibilizing agents, etc.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 6 OF 16 USPATFULL on STN

ACCESSION NUMBER: 2003:210069 USPATFULL

TITLE: Method of continuous cationic living polymerization

INVENTOR(S): Terazawa, Hiromu, Kobe, JAPAN

Wachi, Shun, Takasago, JAPAN Furukawa, Naoki, Himeji, JAPAN

PATENT ASSIGNEE(S): Kaneka Corporation, Osaka, JAPAN (non-U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 6602965 B1 20030805

WO 2000075193 20001214

APPLICATION INFO.: US 2002-980778 20020322 (9)

WO 2000-JP3703 20000608

NUMBER DATE

-----

PRIORITY INFORMATION: JP 1999-161122 19990608

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Wu, David W.
ASSISTANT EXAMINER: Cheung, William
LEGAL REPRESENTATIVE: Sughrue Mion, PLLC

NUMBER OF CLAIMS: 11 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 5 Drawing Figure(s); 5 Drawing Page(s)

LINE COUNT: 990

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A polymer is produced by feeding a polymerization initiator, a cationically polymerizable monomer component and a catalyst continuously to a flow-through stirring vessel reactor to thereby allow the living polymerization to initiate and feeding a reaction solution from said flow-through stirring vessel reactor to a flow-through tubular reactor continuously to thereby allow the living polymerization to proceed, said reaction solution having a conversion rate of said cationically polymerizable monomer component of not less than 1% by weight to less than 90% by weight.

## CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 7 OF 16 USPATFULL on STN

ACCESSION NUMBER: 2003:113606 USPATFULL

TITLE: Triazine compounds, polymers comprising triazine

structural units, and method

INVENTOR(S): Brown, Sterling Bruce, Niskayuna, NY, UNITED STATES

Brack, Hans Peter, Etten-Leur, NETHERLANDS

Cella, James Anthony, Clifton Park, NY, UNITED STATES

Karlik, Dennis, Bergen op Zoom, NETHERLANDS

PATENT ASSIGNEE(S): General Electric Company (U.S. corporation)

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Frank A. Smith, GE Plastics, One Plastics Avenue,

Pittsfield, MA, 01201

NUMBER OF CLAIMS: 99
EXEMPLARY CLAIM: 1
LINE COUNT: 2348

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

In various embodiments the present invention comprises 2,4,6-trisubstituted-1,3,5-triazine capping agents comprising one, two, or three leaving groups as substituents with any remaining substituents being essentially inert to reaction with a nucleophilic group on a polymer or monomer, or reactive with a nucleophilic group on a polymer or monomer at a slower rate than any leaving group. The invention also comprises polymers or monomers with nucleophilic groups capped with a triazine moiety. Still other embodiments of the invention comprise processes for capping nucleophilic groups in a polymer or monomer which comprises combining and reacting the polymer or monomer with a

triazine-comprising capping agent.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 8 OF 16 USPATFULL on STN

ACCESSION NUMBER: 2000:18522 USPATFULL

TITLE: Block-graft copolymer, self-crosslinked polymer solid

electrolyte and composite solid electrolyte

manufactured through use of the block-graft copolymer,

and solid cell employing the composite solid

electrolyte

INVENTOR(S): Hirahara, Kazuhiro, Niigata-ken, Japan

Nakanishi, Toru, Tokyo, Japan

Isono, Yoshinobu, Niigata-ken, Japan Takano, Atsushi, Niigata-ken, Japan

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Tokyo, Japan (non-U.S.

·corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 6025437 20000215

APPLICATION INFO.: US 1998-33731 19980303 (9)

NUMBER DATE

PRIORITY INFORMATION: JP 1997-65285 19970304

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Seidleck, James J.
ASSISTANT EXAMINER: Asinovsky, Olga
LEGAL REPRESENTATIVE: Loeb & Loeb, LLP

NUMBER OF CLAIMS: 15 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 1 Drawing Figure(s); 1 Drawing Page(s)

LINE COUNT: 1367

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

There are disclosed a self-crosslinked polymer solid electrolyte, a composite solid electrolyte, and a method of manufacturing the same. A high-energy ray is irradiated to a block-graft copolymer composed of a polymer block chain A represented by formula I and a polymer block chain B represented by formula III in order to crosslink the entire the system. A nonaqueous electrolytic solution is then added to the block-graft polymer to obtain a self-crosslinked polymer solid electrolyte. The self-crosslinked polymer solid electrolyte and an electrically insulating material are combined to obtain a composite solid electrolyte. ##STR1##

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 9 OF 16 USPATFULL on STN

ACCESSION NUMBER: 1998:157448 USPATFULL

TITLE: Telechelic polystyrene/polyethylene copolymers and

processes for making same

INVENTOR(S): Quirk, Roderic P., Akron, OH, United States

PATENT ASSIGNEE(S): FMC Corporation, Philadelphia, PA, United States (U.S.

corporation)

NUMBER DATE

------

PRIORITY INFORMATION: US 1995-1895P 19950804 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Teskin, Fred

LEGAL REPRESENTATIVE: Bell Seltzer Intellectual PropertyLaw Group of Alston &

Bird LLP

NUMBER OF CLAIMS: 109 EXEMPLARY CLAIM: 1,86 LINE COUNT: 2155

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Polyalkenylaromatic-polyethylene copolymers are prepared using protected functional organolithium initiators. Polymerization of an alkenylsubstituted aromatic monomer followed by ethylene, results in a protected functional block polystyrene-co-polyethylenyllithium. Termination with a functionalizing agent followed by deprotection produces polymeric products with high functionalization at the initiating chain-end and at least partial functionalization at the

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 10 OF 16 USPATFULL on STN

terminal chain-end.

ACCESSION NUMBER: 1998:30841 USPATFULL

TITLE:

Resin composition for flexographic printing plate

INVENTOR(S): Kanda, Kazunori, Yao, Japan Ueda, Koichi, Neyagawa, Japan

Kakiuchi, Tadahiro, Kawanishi, Japan Muramoto, Hisaichi, Hirakata, Japan

Sato, Hozumi, Tsukuba, Japan

Koshimura, Katsuo, Yokkaichi, Japan Nishioka, Takashi, Yokkaichi, Japan

PATENT ASSIGNEE(S):

Nippon Paint Co., Ltd., Osaka-fu, Japan (non-U.S.

corporation)

Japan Synthetic Rubber Co., Ltd., Tokyo-to, Japan

(non-U.S. corporation)

NUMBER DATE

PRIORITY INFORMATION:

JP 1994-294456 19941129

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Hamilton, Cynthia

LEGAL REPRESENTATIVE: Wenderoth, Lind & Ponack

NUMBER OF CLAIMS: 21 EXEMPLARY CLAIM: 1,12,19 LINE COUNT: 1132

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention provides a resin composition for flexographic printing plate, which is superior in rubber elasticity, hardness and elongation as well as water developability. The resin composition for flexographic printing plate capable of water developing, attains excellent rubber elasticity, hardness and elongation without deterioration of water developability, using as elastic particles copolymer elastic particles having whisker on the particle surface which forms an entanglement between particles.

ANSWER 11 OF 16 USPATFULL on STN

ACCESSION NUMBER: 93:48341 USPATFULL

TITLE:

Lithium cell

INVENTOR(S):

Yamada, Motoyuki, Kanagawa, Japan Watanabe, Osamu, Kanagawa, Japan Nakanishi, Toru, Kanagawa, Japan Takamizawa, Minoru, Tokyo, Japan

PATENT ASSIGNEE(S):

Shin-Etsu Chemical Co., Ltd., Tokyo, Japan (non-U.S.

corporation)

NUMBER KIND DATE -----

PATENT INFORMATION: APPLICATION INFO.:

US 5219681 US 1991-771432 19930615 19911010 (7)

NUMBER DATE

PRIORITY INFORMATION:

-----JP 1990-272858 19901011

DOCUMENT TYPE:

Utility

FILE SEGMENT:

Granted

PRIMARY EXAMINER:

Chaudhuri, Olik

ASSISTANT EXAMINER:

Nuzzolillo, M.

LEGAL REPRESENTATIVE: Wyatt, Gerber, Burke and Badie

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

NUMBER OF DRAWINGS:

6 Drawing Figure(s); 4 Drawing Page(s)

LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

A lithium cell having excellent discharging and recharging characteristics is proposed which is characteristic in the unique formulation of the polymeric solid electrolyte composition having a high ionic conductivity to fill the space between the anode and the cathode. The electrolyte composition comprises: (a) a block copolymer of styrene and 4-hydroxystyrene, of which the phenolic hydroxy groups in the 4-hydroxystyrene moiety are substituted by the grafting chains of poly(ethylene oxide) moiety having a specified chain length, (b) an ionic lithium salt and (c) a poly(ethylene oxide) in a specified weight proportion.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 12 OF 16 USPAT2 on STN

ACCESSION NUMBER:

2004:178075 USPAT2

TITLE:

Patternable low dielectric constant materials and their

use in ULSI interconnection

INVENTOR(S):

Lin, Qinghuang, Yorktown Heights, NY, UNITED STATES Sooriyakumaran, Ratnam, San Jose, CA, UNITED STATES International Business Machines Corporation, Armonk,

PATENT ASSIGNEE(S):

NY, UNITED STATES (U.S. corporation)

KIND DATE NUMBER -----PATENT INFORMATION:

APPLICATION INFO.:

US 7041748 B2 20060509 US 2003-338945 20030108 (10)

DOCUMENT TYPE:

Utility GRANTED

FILE SEGMENT: PRIMARY EXAMINER:

Robertson, Jeffrey B.

LEGAL REPRESENTATIVE:

Scully, Scott, Murphy & Presser, Jaklitsch, Lisa U.

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

NUMBER OF DRAWINGS:

6 Drawing Figure(s); 3 Drawing Page(s)

LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to ultra-large scale integrated (ULSI) interconnect structures, and more particularly to patternable low dielectric constant (low-k) materials suitable for use in ULSI interconnect structures. The patternable low-k dielectrics disclosed herein are functionalized polymers that having one or more acid-sensitive imageable functional groups.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:874456 CAPLUS

DOCUMENT NUMBER: 143:410802

TITLE: Controlled Delivery of Paclitaxel from Stent Coatings

Using Poly(hydroxystyrene-bisobutylene-b-hydroxystyrene) and

Its Acetylated Derivative

AUTHOR(S): Sipos, Laszlo; Som, Abhijit; Faust, Rudolf; Richard,

Robert; Schwarz, Marlene; Ranade, Shrirang; Boden,

Mark; Chan, Ken

CORPORATE SOURCE: Polymer Science Program, Department of Chemistry,

University of Massachusetts Lowell, Lowell, MA, 01854,

USA

SOURCE: Biomacromolecules (2005) 6(5), 2570-2582

CODEN: BOMAF6; ISSN: 1525-7797

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal LANGUAGE: English

A poly(styrene-b-isobutylene-b-styrene) (SIBS) triblock polymer is employed as the polymer drug carrier for the TAXUS Express2 Paclitaxel-Eluting Coronary Stent system (Boston Scientific Corp.). has been shown that the release of paclitaxel (PTx) from SIBS can be modulated by modification of either drug-loading ratio or altering the triblock morphol. by blending. In the present work, results toward achieving release modulation of PTx by chemical modification of the styrenic portion (using hydroxystyrene or its acetylated version) of the SIBS polymer system are reported. The synthesis of the precursor poly{(p-tert-butyldimethylsilyloxystyrene)}-b-isobutylene-b-{(p-tert-accomplished by living sequential block copolymn. of isobutylene (IB) and p-(tert-butyldimethylsiloxy)styrene (TBDMS) utilizing the capping-tuning technique in a one-pot procedure in methylcyclohexane/CH3Cl at -80°. This procedure involved the living cationic polymerization of IB with the 5-tert-butyl-1,3-bis(1-chloro-1methylethyl)benzene/TiCl4 initiating system and capping of living difunctional polyisobutylene (PIB) chain ends with 1,1-ditolylethylene (DTE) followed by addition of titanium(IV) isopropoxide (Ti(OIp)4) to lower the Lewis acidity before the introduction of TBDMS. Deprotection of the product with tetrabutylammonium fluoride yielded poly( hydroxystyrene-b-isobutylene-b-hydroxystyrene ), which was quant. acetylated to obtain the acetylated derivative The hydroxystyrene and acetoxystyrene triblock copolymers have acceptable mech. properties for use as drug delivery coatings for coronary stent applications. It was concluded that the hydrophilic nature of the endblocks and polarity effects on the drug/polymer miscibility lead to enhanced release of PTx from these polymers. The drug-polymer miscibility was confirmed by differential scanning calorimetry and atomic force microscopy evaluations.

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN ACCESSION NUMBER: 2005:735362 CAPLUS

INVENTOR (S):

LANGUAGE:

DOCUMENT NUMBER: 143:194425

TITLE: Copolymers comprising olefin and protected

or unprotected hydroxystyrene units and

manufacture of block copolymers Faust, Rudolf; Sipos, Laszlo

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 11 pp.

CODEN: USXXCO

DOCUMENT TYPE:

Patent English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PA'	PATENT NO.					5	DATE			APPLICATION NO.					DATE			
บร	2005176891				A1 20050811			US 2004-776674					20040211					
CA	2554530				A1 20050825			CA 2005-2554530					20050211					
WO	2005077995				A1 20050825			WO 2005-US4379					20050211					
	W:	ΑE,	AG,	AL,	AM,	AT,	AU,	AZ,	BA,	BB,	BG,	BR,	BW,	BY,	BZ,	CA,	CH,	
		CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,	GB,	GD,	
		GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	KP,	KR,	KZ,	LC,	
		LK,	LR,	LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NA,	NI,	
		NO,	NZ,	OM,	PG,	PH,	PL,	PT,	RO,	RU,	SC,	SD,	SE,	SG,	sĸ,	SL,	SY,	
							TZ,											
	RW:	•	•	•			MW,	•	•	•	•	•	•	•	•	•		
		•	•	•	•	•	RU,	•	•	•	•	•	•	•	•		•	
		•	•	•	•		GR,	•	•		•	•	•		•	•	•	
		-	•	-			BF,		•		•	-		-	•		•	
			•	•	TD,			•	•	,		•	•		~ ~ ,		•	
					•				EP 2005-722963					20050211				
							CZ,									HU.	IE.	
			•	•	•		MC,	•	•	•	•		•	•	-		,	
PRIORITY APPLN. INFO.:						,	,	,	US 2004-776674					•				
WO 2005-US4379																		

AB Copolymers, including block copolymers, comprise (a) many constitutional units that correspond to ≥1 olefin monomer, e.g. isobutylene and (b) many constitutional units that correspond to ≥1 protected (or unprotected) hydroxystyrene monomer species. These copolymers are capable of being hydrolyzed, forming polymers of increased hydrophilicity.

```
L3 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN
```

ACCESSION NUMBER: 2004:930087 CAPLUS

DOCUMENT NUMBER: 142:94257

TITLE: Synthesis and Characterization of Triptych  $\mu$ -ABC

Star Triblock Copolymers

AUTHOR(S): Li, Zhibo; Hillmyer, Marc A.; Lodge, Timothy P.

CORPORATE SOURCE: Department of Chemistry and Department of Chemical

Engineering and Materials Science, University of Minnesota, Minneapolis, MN, 55455, USA

SOURCE: Macromolecules (2004), 37 (24), 8933-8940

CODEN: MAMOBX; ISSN: 0024-9297

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal LANGUAGE: English

AB We describe a general procedure for the synthesis of miktoarm star triblock copolymers with a hydrocarbon, a fluoropolymer, and a hydrophilic segment. Several µ-(polyethylethylene) (poly(ethylene

oxide))(poly(perfluoropropylene oxide)) [μ-(PEE)(PEO)(PFPO)] star

triblock copolymers were prepared using two successive anionic polymerization steps

and one polymer-polymer coupling reaction. Initially, living polybutadienyllithium chains were end-capped with 2-methoxymethyloxirane forming a heterobifunctional 1,2-polybutadiene

(PBD) precursor, with a hydroxyl group and a protected hydroxyl group at one chain end. Catalytic hydrogenation of this PBD gave the corresponding polyethylethyene (PEE) while preserving the end group structures. Transformation of the terminal hydroxyl group in the PEE precursor to a potassium alkoxide followed by addition of ethylene oxide and subsequent end-capping with Et bromide generated polyethylethylene-poly(ethylene oxide) (PEE-PEO) diblock copolymers with a protected hydroxyl group at the junction. Deprotection of the methoxymethyl group followed by coupling with acid chloride end-capped PFPO yielded well-defined  $\mu\text{--}(PEE)$  (PEO) (PFPO) star triblock copolymers. Detailed mol. characterization of these products and their precursors confirmed the composition and architecture of these new star block copolymers. This modular strategy represents a new, straightforward, and versatile methodol. for the preparation of mixed arm star block copolymers.

REFERENCE COUNT:

THERE ARE 63 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:

2000:755619 CAPLUS

DOCUMENT NUMBER:

134:42549

TITLE:

Synthesis of Novel Aggregating Comb-Shaped Polyethers

for Use as Polymer Electrolytes

AUTHOR(S):

Jannasch, Patric

CORPORATE SOURCE:

Department of Polymer Science Engineering, Lund

University, Lund, SE-221 00, Swed.

SOURCE:

Macromolecules (2000), 33(23), 8604-8610

CODEN: MAMOBX; ISSN: 0024-9297

PUBLISHER:

American Chemical Society

DOCUMENT TYPE:

Journal

LANGUAGE:

English

AB Polyethers having well-defined comb-shaped architectures were prepared by using poly(4-hydroxystyrene) (PHSt) as a multifunctional initiator for graft polymerization of either ethylene oxide (EO) or a mixture of EO and propylene

oxide (PO). The grafting process was performed in 1,4-dioxane using NaH as ionizer for the PHSt hydroxyl groups. The precursor PHSt was prepared by first polymerizing 4-tert-butoxystyrene, using butyllithium as initiator in THF at -60 °C, and then deprotecting the butoxy groups. Finally, the terminal hydroxyl groups of the polyether grafts were end-capped with hexadecanoyl units through esterification. The monomer addition sequence in the graft copolymns, with the same EO/PO feed ratio proved to have a great influence on the crystallization temperature and the crystallinity of the

grafts. Also, the end-capping was found to reduce the degree of crystallinity as compared to the corresponding uncapped polymers. Solid polymer electrolytes containing lithium triflate (LiSO3CF3) salt had ambient temperature ion conductivities of .apprx.10-5 S/cm at [Li]/[O] = 0.025. Thermal

anal. of the electrolytes showed that the polymers aggregated through phase separation of the hexadecanoyl chain ends.

REFERENCE COUNT: 29 THERE ARE 29 CITED

THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> log y COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION 100.60 100.81 FULL ESTIMATED COST DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SINCE FILE TOTAL ENTRY SESSION -3.00 -3.00 CA SUBSCRIBER PRICE